From: Venkataraman, Sriram
Sent: Monday, March 21, 2011 8:27 PM
To: Rowe-west, Beth
Cc: Johnson, Jammie
Subject: RE: NCHIE Request for Comments on Statewide HIE Requirements

(Beth, Thanks for all your comments. Here is the updated version with your feedback included…)

Here is my feedback based on attached document as well as on HIE comments on our RFP. I understand these are due Mar 25th. Please feel free to pass this e-mail to HIE before our mtg, if you like. Please let me know if any questions.

1. To accommodate differing needs of NCIR providers, NC HIE will facilitate both workflow models 1a and 1b (listed below). The choice to use either model will be dependent on provider organization needs.

a. Provider organizations enter immunization information directly to NCIR user interface. Provider organization's EMR sends a real-time query to NCIR to obtain and store immunization history thereby avoiding double data entry. Real time query can be sent either directly to NCIR or through NC HIE.

b. Provider organization enters immunization data in EMR. EMR uses real time request response to locate the correct client in the NCIR and update immunization information either directly or through NC HIE. In this scenario, EMR will be the primary immunization tool for the providers and NCIR will provide statewide data source. Also, EMR's can obtain immunization history of a patient from NCIR using real time request response.

2. NC HIE will adopt NCIR's certification standards for accepting immunization. Essentially, providers having the capability to update NCIR data through NCHIE need to be certified just as they will be need to be certified if they were exchanging data directly with NCIR. However, these standards would not be required of participants who are interested only in query of NCIR as long as they meet other access requirements. NCIR will publish these requirements at the time of Bi-directional data exchange roll out.

3. One of the feedbacks provided by NC HIE team was for NCIR to accept Batch-send of immunizations administered by providers through NCHIE. NCIR is hesitant to do this for data quality reasons. Lack of two-way interaction results in issues like update of incorrect client (ex. false positive match) or addition of duplicate clients. Real time query to identify correct client followed by update provides a better alternate. Real time query enables EMR user to view possible matches before choosing the correct client to update, thereby increasing accuracy and minimizing duplicates. NCIR's preference is to use real time request/response instead. [This feedback was provided as part of document titled 'Considerations to incorporate NCHIE interactions with the IZ Registry' sent to NCIR.]

4. NCIR will offer real time request-response interface capability using HL7 message transactions. Using this interface, EMR's will be able to query NCIR (either directly or through NC HIE) in real time to obtain immunization history of client. In addition, EMR's will be able to update the immunization record of correct client using HL7 transactions. The request-response model is preferred for data quality reasons as stated above in pt# 3. CDC has documented the HL7

transactions needed for real time request response. Few states have already implemented this and is in operation.

5. NCHIE will pass the HL7 messages from providers directly to NCIR without any alterations. In cases, where a translation service is provided, NCHIE will take adequate measures to assure accuracy of translation to HL7 messages. It is expected that all communication with NCIR will be based on HL7 messages.

6. As per Attachment 1-6 # 3, providers will need to register patient information with HIE to allow sharing of immunization information. Since NC does not allow opt out (for immunizations), NC providers do not need consent from parent to report immunization information to NCIR and to share with other providers. Further, NCIR provides a single state-wide repository of immunization information. In light of above, the following alternate model may be considered.

a. Provider makes a request for immunization history to NCIR through NC HIE.

b. HIE retrieves patient immunization information (from NCIR) and passes to EMR.

c. Provider recommends and administers next immunization.

d. Provider EMR submits recently administered patient immunization along with any missing immunizations to NCIR through NC HIE.

7. Last but not least, since NC HIE is taking preliminary steps towards interfacing with NCIR, it will be beneficial for both teams to consider forming a sub-group to look at business and technical requirements/use cases that NCIR can support without compromising NC HIE and NCIR data quality. It will benefit both teams to have workflow and other expectations match as we proceed. The members of sub-group could be from both NCIR and NCHIE personnel.

Please let me know if any questions.

Thanks,

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NCIR – EMR interaction using real time request/response:

A typical scenario will be as follows.

Client / Immunization Query:

The provider IT system sends a query for vaccination record (HL7 VXQ message) of a client in real time.

NCIR responds depending on whether the incoming client matches with zero, one or multiple records.

- If exactly one client record match is found in NCIR, a HL7 VXR (Response to Vaccination query Returning the Vaccination record) message is generated and sent.

- If multiple clients match the incoming record, a HL7 VXX (Response to Vaccination Query returning multiple PID matches) message is sent back. The provider system (EMR) would then pick the correct client from possible matches and send another VXQ message with additional client identifying information (say client id).

- A QCK message is generated when NCIR has processed the query message, but no client match was found to the query parameters in the database. [QAK (Query Acknowledgment Segment) to return precise response status.]

Client / Immunization update:

A typical workflow would be as follows.

Identify the client in NCIR to update using Client / Immunization query described above. [That is, send VXQ message and receive either a VXR (Vaccination record) or VXX (multiple client match).]

Once client identified, the provider system may send a HL7 VXU (Unsolicited Vaccination update) message to update NCIR. Both inventory and historical doses may be added/updated using VXU transaction. NCIR will process VXU message and send back an acknowledgement message. An ACK message is generated for message rejections and informational error messages.